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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/537,123 | 10/25/2005 | Gert Joly | L0006/US | 8388 |

30522 7590 06/10/2010
KRATON POLYMERS U.S. LLC
16400 Park Row
HOUSTON, TX 77084

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| EXAMINER |
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EGWIM, KELECHI CHIDI

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| ART UNIT | PAPER NUMBER |
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1796

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

06/10/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kratonip@kraton.com

| | | | |
|------------------------------|---|------------------------------------|--|
| Office Action Summary | Application No. 10/537,123 | Applicant(s) JOLY ET AL. | |
| | Examiner Dr. Kelechi C. Egwim | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-16 and 18-34 is/are pending in the application.
- 4a) Of the above claim(s) 22-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-21 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application contains claims 22-33 drawn to an invention nonelected with traverse in the reply filed on 03/12/2010. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 102/103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 11-16 and 18-21 are rejected under 35 U.S.C. 102(a or e) as being anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Varma, for reason cited in previous actions.

4. Claims 11-16 and 18-21 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Maekawa et al., for reasons cited in the previous action.

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5. Claims 11-16, 18-21 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Zhang et al., for reason cited in previous actions.

Response to Arguments

6. Applicant's arguments filed 03/12/2010 have been fully considered but they are not persuasive.

7. Regarding Varma et al., in ¶ 71, the reference teaches a tri block copolymer wherein the end blocks are styrene (S) and the middle (M) block is isoprene, butadiene or a combination of the two. Thus, it does teach the S-I/B-S structure.

8. Also, in ¶ 71, Varma et al. teach the ratio of the styrene (S) block to the diene (M) block to be 60/40 to 80/20, at least a portion of which anticipates applicant's 30/70 to 70/30 ratio.

9. Regarding Maeawa et al., claim 34 is not rejected by Maeawa et al.

10. Also, in col. 6, lines 32-36, Maeawa et al. teach the styrene (S) block to represent 5 to 75% of the block copolymer, i.e., a ratio of 5/95 to 75/25 with the (B) block.

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11. Applicant argues that while Zhang et al., teach the structure S-I/B-S, that it doesn't not suggest the [S-I/B]_nX structure, which is a structure with the diene "soft" blocks of the block copolymers are attached radially to a central "X" coupling agent. However, in page 15, lines 20-23, Zhang et al. teach said radial block copolymers, wherein the (B-A) blocks are attached to a central group, wherein "n" may be for example 4, 5 or 6, and wherein the "B" block are exemplified in page 16, lines 1-4, as being selected from as small group including butadiene, ethylene/butadiene, ethylene/propylene, isoprene or isoprene/butadiene (I/B), and the A block is styrene (S). Thus, the [S-I/B]_nX structure is also taught.

12. Regarding the T_g of the diene block (I/B), in page 14, lines 31 to 34, Zhang et al. teach the diene block to be the "soft" block, having sufficiently low glass transition temperatures.

13. Regarding the ratio of the styrene (S) block vs. the diene (I/B) block, in page 14, lines 26-30, Zhang et al. teach a ratio of 10/90 to 80/20 for the styrene and diene blocks, which anticipates applicant's 30/70 to 70/30 ratio.

14. It is reasonable that the I/B diene blocks in the block copolymers of the prior art would possess the presently claimed properties since the composition of the prior art block copolymers are essentially the same as the claimed composition and the USPTO does not have at its disposal the tools or facilities deemed necessary to make physical

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determinations of the sort. In any event, an otherwise old composition is not patentable regardless of any new or unexpected properties. In re Fitzgerald et al, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112 - § 2112.02.

Even if assuming that the prior art references do not meet the requirements of 35 U.S.C. 102, it would still have been obvious to one of ordinary skill in the art, at the time the invention was made, to arrive at the same inventive composition because the disclosure of the inventive subject matter appears within the generic disclosure of the prior art.

Further, one of ordinary skill in the art would have found it prima facie obvious to determine a workable or even optimal T_g range for the diene center blocks, based on the final application. "[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." In re Boesch, 617 F.2d 272,276, 205 USPQ 215, 219 (CCPA 1980); "[W]here the general conditions of a claim are disclosed in the art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Aller, 220 F.2d 454,456, 105 USPQ 233, 235 (CCPA 1955).

15. In response to applicant's argument that the prior art have different end applications for their block copolymers, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art, which

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is not the case here. If the prior art structure is capable of performing the intended use, then it meets the claim.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kelechi C. Egwim whose telephone number is (571) 272-1099. The examiner can normally be reached on M-T (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dr. Kelechi C. Egwim/
Primary Examiner, Art Unit 1796

KCE